Serial No.: 09/960,649

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Inventor: Pecus et al.

Group Art Unit: 2152

Examiner Chankong

Title: Micronode in a Satellite Based Content Delivery System

DECLARATION OF PHILIP LAUSIER

I, Philip A. Lausier, declare as follows:

1.   I am a named inventor of U.S. Non-Provisional Patent Application Number 09/960,649, entitled "Micronode in a Satellite Based Content Delivery System", filed on September 21, 2001, claiming priority from U.S. Provisional Patent Application Serial Number 60/275,795, entitled "Micronode in a Satellite Based Content Delivery System", filed on March 13, 2001.

2.   I am an employee of PanAmSat, assignee of the application, since having been hired on August 21, 1995.

3.   I declare that I was in possession of the invention as disclosed in claims 1 – 16 of the present application, U.S. Patent Office Serial No. 09/960,649, at least by December 6, 2000.

4.   In mid-2000, I referred to this invention as the "single server node" or "single server edge node." By December 6, 2000 I, along with other members of the edge node design team, had conceived of the single server node, designed it, built a working model, and may have started testing it. The project management later changed the name of the invention to a micronode. For the balance of this document I will refer to the invention as the micronode.

5. As evidence that I and my colleagues had developed the claimed micronode before December 6, 2000, I have attached the following documents:

- Exhibit A: "Edge Node Specification (RFP Draft 1)", dated December 6, 2000

- Exhibit B: "Major Activities for NET/36", dated April 25, 2000

- Exhibit C: "NET/36 Engineering Status", dated August 17, 2000

- Exhibit D: Table of Engineering Status, dated October 30, 2000

- Exhibit E: email correspondence between Vivian Pecus, Mark Daniels, and Mark Alexander on various dates

- Exhibit F: email correspondence between Vivian Pecus, Mark Daniels, and Mark Alexander on various dates

6. As a collection, these documents show evidence of the development process for the single server node and the subsequent name change to the micronode. The micronode was developed as part of a larger PanAmSat project called NET36. For this project, two different edge node configurations were developed: the micronode and a larger edge node configuration. The micronode was designed to work as a single computer, while the larger edge node was assembled as one or more racks of equipment.

7. Exhibit A is a first draft of an engineering specification for an edge node with a release date of December 6, 2000. In this document, the micronode is referred to as the "Small Market Edge Node" in the table of Section 3.2 and the "Small" edge node in the table of Section 3.9.1.

8. Figure 1 on page 10 of this specification is a block diagram showing the configuration of the micronode of the present application. This diagram shows the elements of the invention as disclosed in claims 1 and 4. Specifically, it shows the public VLAN and the

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private VLAN called VLAN 1 and VLAN 2 respectively. It also shows the receive equipment from the satellite connected to (private) VLAN 2 and a connection to a last mile service provider (LMSP) from (public) VLAN 1.

9.   Figure 1.1, a system overview on page 3, shows the micronode as being situated at a LMSP facility. This diagram shows the terrestrial backchannel connection to the edge node, disclosed in claims 5 and 6, as a connection through the Internet.

10.   Section 3.1.3 of this specification requires a firewall on (public) VLAN 1 that is a "Netscreen 10 or equivalent." This firewall, shown in Figure 1 as the Netscreen unit, connects VLAN 1 and VLAN 2. The VPN connection of claims 2 and 3 was to be established through the Netscreen firewall.

11.   Section 3.2 of this specification requires the output of the micronode to stream both live and on-demand (non-live) content, as disclosed in claims 7 and 8.

12.   Section 3.3 of the specification discusses the shared storage requirements of claims 11 and 12.

13.   The balance of the specification describes other hardware and operating requirements of the micronode.

14.   Exhibit B is a presentation to the board of directors of PanAmSat on PanAmSat's NET/36 project, for which the micronode was developed. Although no specific status date is shown in the presentation, the file is named NET36_42500_board.ppt, referring to a status date of April 25, 2000. However, pages in the presentation provide evidence of the timing of the presentation. Specifically, page 8 refers to "Beta with 6 to 12 content providers in Q2 will serve that purpose" and beta terms to be completed in "early May."

15.   Page 13 shows that micronode had been conceived and development work had already begun with a statement of work (SOW) created, and a "Beta" or test version of micronode in progress.

16.   Pages 15 – 17 show the operational status of the NET/36 project as of the presentation date, end of May, and end of August. The boxes listed as "Edge Networks" refer to edge nodes. As of the time of the presentation no hardware had been deployed. However, page 16 provides further evidence of my possession of the micronode as a plan for a "Beta/Internal" version of the edge node as of the end of May with hardware versions for small ISPs (Internet Service Providers) and larger networks ready by the end of August. Although not explicitly shown in this presentation, the smaller version was the micronode or single server node.

17.   Pages 19 and 20 of Exhibit B show edge node development and deployment status and plans.

18.   Exhibit C is an engineering status report for the NET/36 project. Although no specific status date is shown in the report, the filed is named NET36_Project_Status_817.ppt, referring to a status date of August 18, 2000.

19.   Pages 4-6 show NET/36 system layouts including edge networks, i.e., edge nodes at different times: page 4 (titled "Where we would like to be") shows the desired layout, page 5 (titled "Where we are today") shows the layout as of August 18, 2000, and page 6 (titled "End of August configuration") shows the desired layout as of the end of August.

20.   Page 9 (titled "Key technologies") mentions the (Internet) redirection engine disclosed in the newly added claims 13 – 16 of the current amendment. Page 17 (titled "System Overview") shows this Internet Redirection Engine (IRE) being located at the system's network operations center (NOC). It should be noted that there is a typographic error in the

diagram: the IRE is written as "NRE". This figure also shows the back-channel of claims 5 and 6.

21. Page 14 (titled "Who is doing what today?") shows that a design team for the edge node was already in place, and page 16 (titled "Edge Node Design team") lists several of the named inventors – David Bullock, Mark Kalmback, Chris Benden, and myself - as members of that team.

22. Pages 27 and 28 (titled "What does a CP [content provider] have to do get data tagged?" and "What is the configuration being fielded today" respectively) also mention the internet redirection of claims 13 – 16.

23. The configuration as of the status report date shown on page 28 presents an early operational version of an edge node system. Its capabilities are listed on page 29 (titled "What can the system do today") with planned functional upgrades on page 30 (titled "Planned upgrades").

24. Page 31 (titled "Configurations Planned") shows that a single server, i.e.; the micronode version of claims 1 and 4, was being planned along with a larger edge node as of the August 17, 2000 date of the report.
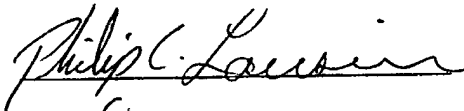
25. Pages 33 (titled "Edge Node August Increment") and 34 (titled "Critical Milestones") show near term work and critical milestones for the project including finalizing both edge node designs (large and micronode) by September 26th.

26. Exhibit D, the Table of Engineering Status, shows the engineering status at various PanAmSat facilities as of October 30, 2000. Again, the status date is in the file name – Table_for_Eng_Ops_Stats_10_30. As of the status date, PanAmSat had produced 20 four server nodes.

27.   The email correspondence of Exhibit F shows that as of January 8, 2001, the single server configuration, i.e., the micronode had been built and running for "a couple of weeks" with 3 or 4 units ready to be built up (see email from Vivian Pecus, Vipecus@aol.com, to MAAlexander@panamsat.com). It also notes that there was no documentation package for the micronodes written yet (see email from Mark Daniels to Vivian Pecus). Furthermore, the email from Mark Alexander indicates that term "Micro-Node" might be used to refer to the single server node.

28.   The use of micronode as the term for the single server node is confirmed in Exhibit G in an email from Vivian Pecus to Matt Armstrong dated January 16, 2001.

I declare under penalty of perjury that all statements made here are based on my own knowledge and are believed to be true.   understand that willful false statements and the like are punishable by fine or imprisonment, or both (18 U.S.C. section 1001), and may jeopardize the validity of the patent subject to reexamination.

2-24-2006
Date

Philip A. Lausier
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